transporting the pre-alloyed substrate to which the corrosion protection oil has been applied,

heating the pre-alloyed substrate to which the corrosion protection oil has been applied to a temperature T2 such that the Al—Si protective coating is fully alloyed with Fe of the steel product and the corrosion protection oil is removed without leaving residue, and

shaping the re-heated substrate to form the component.

2. Method according to claim **1**, wherein the temperature T**2** corresponds to a temperature range of 850° C. to 1000° C.

3. Method according to claim **1**, wherein the heating of the pre-alloyed substrate to which the corrosion protection oil has been applied to the temperature T**2** comprises:

heating the substrate to the temperature range T**2** of 850° C. to 1000° C.,

holding the substrate in the temperature range T**2**, and

cooling the substrate to a temperature range T**3** of 550° C. to 750° C.

4. Method according to claim **3**, wherein the heating to T**2** is 60 to 210 s.

5. Method according to claim **3**, wherein the holding in the temperature range T**2** is 30 to 600 s.

6. Method according to claim **3**, wherein the cooling after the pre-alloying takes place occurs with a cooling rate in the range of 2 to 25 K/s.

7. Method according to claim **1**, wherein the heating to T**2** takes place under a protective atmosphere.

8. Method according to claim **1**, wherein the temperature T**1** corresponds to a temperature range of 550° to 780° C.

9. Method according to claim **1**, wherein the composition contains at least 98% by weight of the fatty acid esters.

10. Method according to claim **1**, wherein the fatty acid esters is a C8-C16 compound.

11. Method according to claim **1**, wherein the composition has a sulfur content in the range of 0.1-2% by weight.

12. Method according to claim **1**, wherein the composition has a saponification number in the range of 150-265 mg KOH/g.

13. Method according to one of the preceding claim **1**, wherein the corrosion protection oil is applied to the substrate in a quantity of 0.5 to 2 g/m2.

14. Use of a corrosion protection oil consisting of a composition containing fatty acid esters, as a temporary corrosion protection for the storage and/or transport of pre-alloyed substrates consisting of a steel product coated with an Al—Si protective coating.

15. Method according to claim **2**, wherein the temperature T**2** corresponds to a temperature range of 880° C. to 930° C.

16. Method according to claim **3**, wherein the temperature T**2** is a temperature range of 880° C. to 930° C. and/or the temperature range T**3** is a temperature range of 600° C. to 700° C.

17. Method according to claim **4**, wherein the heating to T**2** is 90 to 180 s.

18. Method according to claim **5**, wherein the holding in the temperature range T**2** is 30 to 120 s.

19. Method according to claim **6**, wherein the cooling after the pre-alloying takes place occurs with a cooling rate in the range of 8 to 20 K/s.

20. Method according to **8**, wherein the temperature T**1** corresponds to a temperature range of 600° to 700° C.

* * * * *